Application No. 10/584,453 Docket No.: 1752-0184PUS1 Amendment dated October 8, 2009

Reply to Office Action of July 8, 2009

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) Layered porous titanium oxide comprising an inorganic oxide

as a core and titanium oxide deposited on the surface of the inorganic oxide wherein the

titanium localization index (B/A) represented by the ratio of the proportion of titanium (Ti) to the

sum of the constituent metal (M) of the inorganic oxide and titanium (Ti) determined by X-ray

photoelectron spectroscopy (XPS) [B = Ti XPS /(Ti XPS + M XPS)] to the bulk mixing molar

ratio of titanium (Ti) to the sum of the constituent metal (M) of the inorganic oxide and titanium

(Ti) [A = Ti/(Ti + M)] is 1.6 or more, the repeat distance between the crystal lattice planes of

titanium oxide on the surface of the inorganic oxide is 50Å or less, and the titanium oxide is

deposited on the surface of the inorganic oxide so as to be chemically and/or microscopically

united to the inorganic oxide.

2. (Original) Layered porous titanium oxide as described in claim 1 wherein the amount

of deposited titanium oxide is 13-60 mass%.

3. (Canceled)

4. (Previously Presented) Layered porous titanium oxide as described in claim 1 wherein

the pore sharpness degree is 50% or more.

5. (Previously Presented) Layered porous titanium oxide as described in claim 1 wherein

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the pore volume is 0.3 mL/g or more.

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6. (Previously Presented) Layered porous titanium oxide as described in claim 1 wherein

the specific surface area is 100 m²/g or more.

7. (Previously Presented) Layered porous titanium oxide as described in claim 1 wherein

the inorganic oxide is a hydrosol, a hydrogel, a xerogel, a hydroxide, or a hydrated oxide and the

titanium oxide is deposited on this organic oxide.

8. (Previously Presented) Layered porous titanium oxide as described in claim 1 wherein

the inorganic oxide is synthesized by the pH swing operation.

9. (Previously Presented) Layered porous titanium oxide as described in claim 1 wherein

the inorganic oxide is at least one selected from the group of alumina, silica, magnesia,

silica/alumina, silica/titania, alumina/zirconia, silica/zirconia, and silica/magnesia.

10. (Previously Presented) Layered porous titanium oxide as described in claim 1

wherein the inorganic oxide is needle-shaped or column-shaped.

11. (Previously Presented) Layered porous titanium oxide as described in claim 1

wherein layered porous titanium oxide is obtained in the depositing step which comprises

supplying a raw material titanium solution and a pH adjusting agent in the presence of an

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inorganic oxide and depositing titanium oxide on the surface of the inorganic oxide in the pH

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range between the isoelectric point of titanium oxide and that of the inorganic oxide.

12. (Original) Layered porous titanium oxide as described in claim 11 wherein the

layered porous titanium oxide is obtained by the calcining treatment performed in the

temperature range of 90-900 °C after the depositing step.

13. (Currently amended) A process for producing layered porous titanium oxide as

described in claim 1 comprising an inorganic oxide as a core and titanium oxide deposited on the

surface of the inorganic oxide which comprises a depositing step for supplying a solution of

titanium chloride, titanium sulfate, or titanyl sulfate in the presence of an inorganic oxide and a

pH adjusting agent in the presence of an inorganic oxide and depositing titanium oxide on the

surface of the inorganic oxide in the pH range bewteen the isoelectric point of titanium oxide and

that of the inorganic oxide.

14. (Original) A process for producing layered porous titanium oxide as described in

claim 13 which comprises preparing a dispersion containing the inorganic oxide by the pH swing

operation in the pH swing step before the depositing step for depositing titanium oxide on the

surface of the inorganic oxide and supplying the dispersion as it is to the ensuing depositing step.

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15. (Previously presented) A process for producing layered porous titanium oxide as

described in claim 13 which comprises a calcining step for performing a calcining treatment in

the temperature range of 90-900°C following the depositing step.

16. (Previously presented) A process for producing layered porous titanium oxide as

described in claim 13 which comprises letting a particle growth inhibitor exist in the reaction

system in the step for depositing titanium oxide on the surface of the inorganic oxide, said

particle growth inhibitor containing at least one element selected from the group of silicon,

phosphorus, magnesium, calcium, barium, manganese, aluminum, and zirconium.

17. (Previously presented) A catalyst comprising the layered porous titanium oxide

described in claim 1.

18. (Previously presented) A catalyst comprising the layered porous titanium oxide

described in claim 1 as a carrier and a catalyst metal deposited on this carrier.

19. (Original) A catalyst comprising the layered porous titanium oxide described in claim

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12 as a carrier and a catalyst metal deposited on this carrier.

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